

Mr. E. BIDWELL.

Nest of the Nightingale (*Daulias luscinia*), lined with feathers. From Redhill.

Nest of the Sedge-Warbler (*Acrocephalus phragmitis*), lined with feathers. From Walton-on-Thames.

Nest of the Hedge-Sparrow (*Accentor modularis*), made of sticks and lined with feathers.

Nest of the Chiffchaff (*Phylloscopus rufus*), built without feather-lining. From the Lizard, Cornwall.

Nest of the Penduline Titmouse (*Ægithalus pendulinus*). From S. Europe.

Nest of the Chaffinch (*Fringilla cælebs*), partly covered with scraps of wall-paper.

Nest of the Woodchat (*Lanius pomeranus*), built with flowers. From Malaga.

Nest of the Icterine Warbler (*Hypolais icterina*), built with feathers. Taken within the Arctic Circle in Norway.

Nest of the Moorhen (*Gallinula chloropus*), with the eggs concealed with paper. River Thames.

Mr. J. WHITAKER.

Nest of the Common Heron (*Ardea cinerea*), partly constructed of wire. From Stoke, Notts.

On the motion of the CHAIRMAN, a hearty vote of thanks was given to Mr. Bidwell for the very interesting exhibition he had prepared.

### XXIII.—Notices of recent Ornithological Publications.

[Continued from p. 152.]

#### 34. *Albert on the Birds of Chile.*

[Contribuciones al estudio de Aves Chilenas, por Federico Albert. Entregas 1-5. Santiago, 1898.]

It was quite time that some resident naturalist should take up the study of the interesting avifauna of Chile, and we are pleased that Mr. Albert (Primer preparador del Museo Nacional) should have done so. This series of

papers, of which five have reached us, seem to be separate copies of communications made to the 'Anales de la Universidad.' We trust they will be brought to a conclusion, as, when complete, they will give an account of Chilian birds vastly superior to the wretched compilation of Gay, although not so good as might have been expected in these days. Mr. Albert employs modern nomenclature, and follows mostly the names adopted in James's 'New List of Chilian Birds.' It would have been better if he had followed that lead even more closely in some cases. We observe that he calls the Chilian *Henicornis* "*phaenicura*," instead of "*melanura*," and unites these two distinct species as synonyms. He has probably never seen the true Patagonian *H. phaenicura* (cf. B. M. Cat. xv. p. 26), or would not have made the mistake.

35. *Barrett-Hamilton and Jones on Karaginski Island.*

[A Visit to Karaginski Island, Kamschatka. By G. E. H. Barrett-Hamilton and H. O. Jones. Geogr. Journ. xii. p. 280.]

We call attention to this account of a visit to a little-known island on the north-eastern seaboard of Kamchatka, which is illustrated by many good photographs of the natives and their habitations. The allusions made to the birds are comparatively few, but we are told that in the adjacent channel birds were numerous and Gulls and Terns were noticed. "Red-necked Phalaropes were plentiful," and a fine adult Albatross (*Diomedea albatrus*) was observed.

36. *Bolau on Bird-types in the Hamburg Museum.*

[Die Typen der Vogelsammlung des Naturhistorischen Museums zu Hamburg. Von Hermann Bolau. Mitth. Naturh. Mus. Hamburg, xv. 1898.]

Dr. Bolau gives a very useful list of the specimens of birds in the Natural History Museum upon which new species have been based by Hartlaub, Finsch, Fischer and Reichenow, Meyer and Wieglesworth, and other ornithologists. They are principally from West Africa (*Weiss*), Masailand (*Fischer*), the Pacific Islands (*Mus. Godeffroy*), and Talaut Islands, and represent altogether 99 species.

37. 'Bulletin of the Liverpool Museums.' Vol. i. Nos. 3 and 4.

[1. On the Type of the Spotted Green Pigeon, of Latham, in the Derby Museum.

2. Note on *Turdinulus epilepidotus* (Temm.).

3. Note on a rare Species of *Cyanocorax*—*C. heilprini*.

4. Catalogue of the Picarian Birds (Pici)—Puff-birds, Jacamars, Barbets, Toucans, Honey Guides, and Woodpeckers—in the Derby Museum. By Henry O. Forbes and Herbert C. Robinson.]

The double number of the 'Bulletin of the Liverpool Museums' lately issued contains several ornithological articles. The energetic Director writes on and figures the type of the "Spotted Green Pigeon" of Latham, which is "certainly a *Culænas*," "probably from one of the Pacific Islands," and should be recognized as *C. maculata* (Gm.). He also writes on *Turdinulus epilepidotus* (Temm.), and sets straight several vexed questions involved in its nomenclature. A rare species of *Cyanocorax* (*C. heilprini* Gentry, Pr. Ac. Sc. Phil. 1885, p. 90) is described and figured from a specimen in the Museum, formerly in the Derby Collection, and said to come from the "Rio Negro." This species appears to have been overlooked in the B. M. Cat. vol. iii., but is evidently quite distinct.

Messrs. Forbes and Robinson continue their catalogue of the birds in the Derby Museum, and treat of the Bucconidæ, Galbulidæ, Capitonidæ, Rhamphastidæ, Indicatoridæ, and Pcidæ of that splendid collection, in which this Order is represented by 1871 specimens belonging to 404 (out of 670 described) species.

38. *Campbell on the Australian Bower-birds.*

[Nests, Eggs, and Play-grounds of the Australian *Ptilonorhynchine*, or Bower-birds, and their Allies. By Archibald J. Campbell, Esq., Melbourne. Proc. R. Physical Soc. Edinb. xiv. p. 13.]

Mr. Campbell describes in full detail the nests, eggs, and playing-bowers of the Australian Bower-birds of the genera *Ptilonorhynchus*, *Aelurædus*, *Chlamydodera*, *Scenopæus*, *Sericulus*, and *Prionodura*, and illustrates his notes by many beautiful photographs. The bower of the Great Bower-bird,

*Chlamydodera nuchalis*, which was discovered at Cambridge Gulf by Mr. H. H. Johnston, and is figured on plate iii., is a most remarkable structure.

### 39. Finsch on *Carpococcyx*.

[On the Specific Distinction of the Ground-Cuckoos of Borneo and Sumatra (*Carpococcyx radiatus* and *C. viridis*). By Dr. O. Finsch. Notes Leyden Mus. xx. p. 97.]

It is shown that *Carpococcyx viridis* of Sumatra is distinct from *C. radiatus* of Borneo, as already suggested by Count Salvadori (*cf.* Shelley, Cat. Birds, xix. p. 415). We may remind our readers of the recent discovery of a third species of this remarkable form of Cuckoo (*C. renauldi*) in Annam (see above, p. 145).

### 40. Finsch on new Birds in the Leyden Museum.

[On Seven new Species of Birds in the Leyden Museum from the Islands of Wetter, Kisser, Letti, and New Guinea. By Dr. O. Finsch. Notes Leyden Mus. xx. p. 129.]

Dr. Finsch describes *Sphecotheres hypoleucus*, *Stigmatops nobilis*, and *Gerygone wetterensis* from Wetter (north of Timor); *Gerygone kisserensis* from Kisser (north-east of Timor); *Gerygone pallida* and *Pseudogerygone virescens* from New Guinea; and *Zosterops lettiensis* from Letti, all from specimens in the Leyden Museum.

### 41. Finsch on *Scops magicus* and its Allies.

[Ueber *Scops magicus* (S. Müll.) und die verwandten Arten. Von Dr. O. Finsch. Notes Leyden Mus. xx. p. 163.]

Dr. Finsch writes on *Scops magicus* and its allies—*SS. manadensis*, *rutilus suluensis*, *siaoensis*, and *rutilus*, and strives to bring this difficult group into order with the aid of the fine series in the Leyden Museum.

### 42. Hartert on Birds from the Papuan Islands.

[Through New Guinea and the Cannibal Countries. By H. Cayley-Webster. London: T. Fisher Unwin, 1898. 1 vol. 8vo. 183 pp. Appendix by E. Hartert.]

Under this somewhat sensational title will be found a

narrative of two very adventurous expeditions, during which some of the most interesting and least-known spots of the Papuan subregion were visited. Among these was Etna Bay, on the west coast of Dutch New Guinea (from which Capt. Webster barely escaped with his life), the Trobriand Islands, New Britain, New Hanover, and the Admiralty Islands. The natural-history collections all went to Tring, and many portions of them have already been described in 'Novitates Zoologicae.' An appendix to the present volume by Mr. Hartert gives us an account of some of the rich spoils in birds obtained during the two expeditions. The collection made in German New Guinea was not extensive, but contained some fine Birds of Paradise and a young example of *Megatriorchis dorie*. The list of birds obtained on the Aru Islands has already been published in 'Novitates Zoologicae,' but some additions are now made to it and two new subspecies are described—*Rhectes ferrugineus brevipennis* and *Syma torotoro tutelare*. The series from Etna Bay and Triton Bay, in Western New Guinea, was valuable, as specimens are rarely obtainable from this coast, and are much required for comparison. Here, in Etna Bay, an adult example of *Megatriorchis dorie* was procured. Of the collection obtained by Capt. Webster in New Hanover, which, so far as we know, had never been previously visited by a European collector, Mr. Hartert gives us a full list of the land-birds, comprising examples of some 34 species. Two of these, *Cacomantis websteri* and *Alcyone websteri* (see above, p. 278, Pl. III.), are described as new. The collection shows that the avifauna of New Hanover is not identical with those of New Ireland and New Britain, but contains some indigenous species and an admixture of forms met with in the Admiralty Islands.

#### 43. Hartert on Birds from Ecuador.

[On a Collection of Birds from North-western Ecuador, collected by Mr. W. F. H. Rosenberg. By Ernst Hartert. *Novitates Zool.* v. p. 477.]

This is an account of a collection from the valleys and mountains of North-western Ecuador, which contains ex-

amples of 232 species. It is preceded by some very useful notes by Mr. Rosenberg on the exact localities where the specimens were obtained. Would that the excellent example thus set were followed by every collector! The most important point is Cachair, on the river of that name to the northward of Esmeraldas. The new species and subspecies have been mostly already characterized, but we observe *Capsiempis flaveola magnirostris*, *Pipra mentalis minor*, *Heteropelma rosenbergi*, *Myrmetherula viduata*, *Formicarius analis destructus*, *Strix flammea contempta*, *Columba subvinacea berlepschi*, and *Geotrygon veraguensis cachairensis*, now named for the first time. Other noticeable species are *Turdus daguæ*, *Caprimulgus rosenbergi*, *Neomorphus radiolosus*, and *Pionopsitta pulchra*, as also the following species, which are figured: *Nemosia rosenbergi*, *Buthraupis rothschildi*, *Odontophorus parambæ*, and *Crypturus berlepschi*.

44. *Hartert and Butler on Birds from Perak.*

[A few Notes on Birds from Perak, Malay Peninsula. By Ernst Hartert and A. L. Butler. *Novitates Zool.* v. p. 506.]

After a few useful words on previous authorities on the birds of Perak, systematic notes are given on 13 species, of which *Iole tickelli peracensis* and *Gecinus rodgeri* are described as new.

45. *Hartert on Humming-birds.*

[Further Notes on Humming-birds. By Ernst Hartert. *Novitates Zool.* v. p. 514.]

Mr. Hartert's remarks on his favourite group relate to species of *Cyanolesbia*, *Florisuga*, *Polyerata*, *Hylocharis*, *Eulampis*, and other genera, and relate to various points of identity and synonymy. He describes *Hylocharis ruficollis maxwelli*, from Eastern Bolivia, as a new subspecies.

46. *Hartert on the Birds of Sudest Island.*

[On the Birds collected on Sudest Island, in the Louisiade Archipelago, by Albert S. Meek. By Ernst Hartert. *Novitates Zool.* v. p. 521.]

Mr. A. S. Meek visited Tagula or Sudest Island, near the

eastern end of the Louisiade group, in April 1889, and made "large and fine collections." Mr. Hartert now gives us an account of the birds and refers them to 42 species, of which the following are described as new:—*Chibia carbonaria dejecta*, *Graucalus hypoleucus lousiadensis*, *Edoliosoma amboinense tugulanum*, *Rhipidura setosa nigrimentalis*, *Miagra nupta*, *Myzomela nigrata lousiadensis*, *Zosterops meeki*, and *Lorius hypænochrous devittatus*. Papers on the other islands of the Louisiade group visited by Mr. Meek are to follow.

#### 47. Lee's Photographs of British Birds.

[Among British Birds in their Nesting-Haunts, illustrated by the Camera. By Oswin A. J. Lee. Parts XII. & XIII. 4to. Edinburgh, 1898-99.]

In Part XII., which completes vol. iii., the breeding-haunts of the following species are figured:—*Certhia familiaris*, *Turdus merula* (two plates), *Anthus obscurus*, *Pica rustica*, *Columba palumbus*, *Acrocephalus phragmitis*, *Cinclus aquaticus*, *Fulmarus glacialis*, and *Tringa variabilis*. Part XIII. contains:—*Turdus viscivorus*, *Larus marinus*, *Lanius collurio*, *Alauda arvensis* (two plates), *Buteo vulgaris*, *Ruticilla phænicurus*, *Gecinus viridis*, *Linota cannabina*, and *Sylvia hortensis*. Among the most pleasing, to our taste, are those of the Tree-creeper, Blackbird, Rock-Pipit (exquisite), Red-backed Shrike, Sky-Lark, Buzzard, Redstart, Green Woodpecker (by the way there is a misprint of *vividis* for *viridis* on p. 33), Linnet, and Garden Warbler, while some of the vignettes are, as usual, spirited. Many interesting facts are to be found in the letterpress, such as that the severe winter of 1895-96 almost exterminated the Mistle-Thrush near Doune, in Perthshire; the remarkable increase in the numbers of the Redstart along Strathspey during the last few years; and the important part played by the far too numerous Starlings in annexing the breeding-holes of the Green Woodpecker and driving that bird away. That perilous adventures are not unknown may be seen on reference to the narrative of the photographing of the Great Back-backed Gull's nest (which was easy), and then the Fulmar's, which

was ever so little further off *in yards*, though the return from it cost four hours of the hardest climbing, with heavy odds against return at all!

48. *Meerwarth on the Moulting of Birds of Prey.*

[Beobachtungen über Verfärbung (ohne Mauser) der Schwanzfedern brasilianischer Raubvögel, nebst einem Beitrag zur Phylognese der Raubvogelzeichnung. Von Hermann Meerwarth. Zool. Jahrb. xi. p. 65.]

This essay is based on a careful study of individuals of four species of Brazilian Raptores (*Urubitinga zonura*, *U. schistacea*, *Heterospizias meridionalis*, and *Rostrhamus sociabilis*) kept alive at Para, and seems to show most clearly that the tail-feathers of these birds change their colours without moult. Some excellent coloured plates illustrate the observations. No one interested in this much-vexed subject should fail to consult Herr Meerwarth's important memoir.

49. *Mercier on the Ostrich-farm at Matarieh.*

[Une Visite à la Ferme d'Antruches à Matarieh, près de Caire. Bull. Soc. d'Accl. 1898, p. 250.]

This is an account of a visit paid to the well-known Ostrich-farm at Matarieh, near Cairo (*cf.* P. Z. S. 1895, p. 400), and contains many particulars of interest. Although the extent of the farm is small (6.25 hectares), it contains about 1500 Ostriches. Contrary to usual belief, Ostriches, it would appear, are strict monogamists, and, as we are informed upon good authority, the pair take turns in incubation.

50. *Mott on the Origin of Organic Colour.*

[Two Papers on the Origin of Organic Colour. By T. F. Mott. 8vo. Leicester, 1898.]

In two essays under one cover Mr. Mott propounds certain new views concerning the colours of animals. The author has some physical notions which are not altogether easy of comprehension, but which he expounds as the prime causes of colour-phenomena in both animals and plants. He arrives at one result which appears to be in accord with



our knowledge, and that is that embryos and more simple types of animal and vegetable life have the more simple coloration. The reason for this is that in them "the molecular motions are comparatively free" and indefinite; that afterwards they become "fuller, richer, more definite, and less capable of further modification." "Brilliant coloration," concludes the author, "is a mark of the maturity of some organic force-wave, in which the molecular rhythm has reached its maximum simplification" (!).

### 51. Noble's List of European Birds.

[A List of European Birds, including all those found in the Western Palearctic Area, with a Supplement containing species said to have occurred, but which, for various reasons, are inadmissible. By Heatley Noble, F.Z.S. 8vo. London: R. H. Porter, 1898.]

In this exceedingly useful list, Mr. Noble includes 743 species as entitled to places among the birds of Europe; while there are 89 which have not yet established their claims, and many of these have, indeed, no right to serious consideration. We notice an incongruity in the fact that whereas Mr. Noble includes—very justly—the Asiatic Golden Plover, *Charadrius fulvus*, among European species, he places the American form, *C. dominicus*, among the outsiders; although the latter has undoubtedly been obtained in Great Britain (and therefore in Europe) as well as the former. For persons who do not distinguish the forms specifically, the earliest name is *C. dominicus*; but that is another story. In dividing the Order Tubinares into Families, Mr. Noble has forgotten to insert Puffinidæ after his no. 714; while the printers have got past him with Carthiidæ for Certhiidæ (p. 17). Undoubtedly the compiler of a List with so few blemishes merits our congratulations.

### 52. Oberholser on the Wrens of the Genus *Thryomanes*.

[A Revision of the Wrens of the Genus *Thryomanes*, Sclater. By Harry C. Oberholser. Proc. U.S. Nat. Mus. xxi. p. 421.]

After preliminary remarks and redrawing the differential characters of the four allied genera *Thryothorus*, *Thryo-*

*manes*, *Troglodytes*, and *Anorthura*, Mr. Oberholser gives an "analytical key" to the 15 species and subspecies of *Thryomanes* and proceeds to describe them. They are all forms of *T. bewicki*, of which 13 are ranked as subspecies and 2 (*T. insularis* of Socorro Island and *T. brevicaudus* of Guadalupe Island) as of full specific rank. Seven of the subspecies are now described and named for the first time. In the 'Biologia' we find most of these "subspecies" grouped under one head, and we are not at all sure that this is not the best way of treating them. We fancy that Mr. Oberholser would find it difficult to sort out examples of some of his subspecies, if he did not know their exact localities.

### 53. *Pycraft on the Pterylosis of the Owls.*

[A Contribution towards our Knowledge of the Morphology of the Owls. By W. P. Pycraft, A.L.S., M.B.O.U. Trans. Linn. Soc. 2nd ser. Zool. vii. part 6.]

Mr. Pycraft has studied the pterylosis of some twenty species of Owls, and in a well-written memoir of fifty pages, illustrated by six well-drawn plates, he gives us the results of his investigations on this important, but too little studied, department of bird-structure. The pterylosis of *Asio accipitrinus* is fully described, and that of the other species compared with it. The author does not deviate from the now usually adopted division of the Striges into the two families Asionidæ and Strigidæ, but indicates several minor alterations in classification as desirable. For example, he would relegate the Snowy Owl to the genus *Bubo*, and unite *Speotyto* and *Carine*. An interesting disquisition on the variations of the structure of the external ear in the Owls is illustrated by two plates, and gives us a full statement of our present knowledge of this subject. The structure of the neossoptiles in *Speotyto* is also described.

### 54. *Rothschild on certain Parrots.*

[Notes on some Parrots. By the Hon. Walter Rothschild. Novitates Zool. v. p. 509.]

These remarks are upon some rare Eastern Psittacidæ of

which specimens have lately been received at Tring. Mr. Rothschild proposed to change the name of *Eos rubra* to *Eos bornea*, to which we could not agree, as the species is not found in Borneo. Excellent figures are given of it (plate xviii.) and of the remarkable *Cyclopsittacus macil-wraithi* of New Guinea.

55. *Rothschild on a new Cassowary.*

[*Casuaris loriæ*, sp. nov. By the Hon. Walter Rothschild. *Novitates Zool.* v. p. 513.]

A Cassowary from the hills of British New Guinea is characterized as *C. loriæ*. It is allied to *C. picticollis*, but has a red neck.

56. *Salvadori and Festa on new Birds from Ecuador.*

[Viaggio del Dott. E. Festa nella Repubblica dell' Ecuador e regioni vicine.—XIII. T. Salvadori ed E. Festa. Descrizione di tre nuovi Specie di Uccelli. *Boll. Mus. Zool. ed Anat. Comp. R. Univ. Torino*, xiii. No. 330.]

Three new species, based on specimens obtained by Signor Festa during his recent journeys in Ecuador, are characterized as *Pachyrhamphus xanthogenys*, *Dendrocincla brunnea*, and *Grallaria periphthalmica*.

57. *Seebohm's 'Monograph of the Thrushes.'*

[A Monograph of the Turdidæ, or Family of Thrushes. By the late Henry Seebohm. Edited and completed (after the Author's death) by R. Bowdler Sharpe, LL.D., F.L.S., &c. Part V. Imperial 4to. London: Henry Sotheman & Co., 1898.]

The Monograph of the Thrushes makes excellent progress. We agree with the Editor in his views that *Turdus phæopygoides* and *T. spodiolaemus* are not properly separable from *T. phæopygus*. Owing to the numbers of the plates not being stated in the letterpress, there is sometimes a difficulty in finding the plate referred to, and it is not quite clear to us why the *number* of the plate should not be given in the letterpress in every case.

The following species are figured in this part:—*Turdus*

*phaeopygus*, *T. phaeopygoides*, *T. crotopezus*, *T. tristis*, *T. leucauchen*, *T. albicollis*, *T. leucomelas*, *T. gynophthalmus*, *T. murinus*, *T. comorensis*, *T. plebeius*, *T. obsoletus*, *T. fumigatus*, *T. huxwelli*, *T. albiventer*, *T. grayi*, *T. casius*.

58. *Stejneger on the Birds of the Kuril Islands.*

[The Birds of the Kuril Islands. By Leonard Stejneger. Proc. U.S. Nat. Mus. xxi. pp. 269-296, 1898.]

It is probable that very few persons, even among naturalists, realize the fact that this storm-beaten and dangerous archipelago is 630 miles long (equal, roughly, to the length of the British Islands including the Shetlands), and still fewer have any idea that at some undefined portion of the chain is the meeting-place of two distinct faunas, namely the one coming from Kamchatka in the north, and the other from Yezo in the south. Wosnessenski in 1845-46 wintered on Urup and made collections in several of the larger islands; but his specimens, sent to the St. Petersburg Museum, have never been worked up systematically. Since his time, Capt. H. J. Snow is the only person who has made important collections, and of these some account has been given in Blakiston and Pryer's 'Birds of Japan,' but unfortunately few specimens have any locality less vague than "Kuril Islands" attached to them. Dr. Stejneger was not able to make a prolonged stay in this chain, but he visited some of the Middle Islands in 1896, and his account of the avifauna not only includes all that is known up to date, but also rounds off appropriately his experiences of the Commander Islands and Bering Sea, further northward. The species of birds now recorded are 146 in number, and Dr. Stejneger's list forms a useful commentary on the remarks on birds in Capt. Snow's 'Notes on the Kuril Islands,' published by Murray for the Royal Geographical Society, in 1897, with some excellent maps. This little-known work is essential to a student of the district; and we observe with satisfaction that the orthography "Kuril" has the sanction of both English and American authorities. There is hope that Bering may, in time, eject "Behring," even in newspapers.

59. *Stirling and Zietz on a Fossil Struthious Bird from Australia.*

[*Genyornis newtoni*—a Fossil Struthious Bird from Lake Callabonna, South Australia. Description of the Bones of the Leg and Foot. By E. C. Stirling, M.D., F.A.S., and A. H. C. Zietz, F.L.S. Trans. R. Soc. of S. Australia, 1896, vol. xx. p. 191, pls. iii.-v.]

This paper contains the first instalment of the detailed description of the skeleton of the remarkable Struthious bird *Genyornis newtoni*, a brief notice of the preliminary account of which has already appeared in this journal. The bones of the hind limb are now described and compared with those of other Ratite birds, and a number of excellent photographic figures of the specimens are given.

The femur seems to be chiefly notable for the smoothness of the shaft, which is trilateral in section, the absence of any posterior projection of the trochanter such as occurs in *Dinornis*, and the presence of pneumatic openings both at the upper end of the bone and in the popliteal fossa. The tibio-tarsus has a very large cnemial crest, which rises high above its articular surface; the lower end of the shaft is strongly inflected inward; and there is a very oblique, nearly median extensor bridge. In the metatarsus there is a well-developed intercondylar process, and the hypotarsus is simple; the lower end of the groove between the third and fourth trochleæ is perforated by a foramen. The second trochlea is extremely reduced, and the toe which it bears is very slender, although the first phalangeal is longer than that of the middle toe. In digits 3 and 4 there are four phalanges, which are much flattened from above downward. So far as the hind limb is concerned *Genyornis* therefore seems to have been particularly remarkable for the reduction and comparatively small size of the foot compared with the massiveness of the upper part of the leg, and, in the reduction of its inner toe, it seems to have been well on the way to the condition seen in the Ostrich, in which this toe is absent and the trochlea reduced to a small pointed process of bone. It may be suggested that the ancestor of *Genyornis* may have been a swamp-loving bird with massive limbs and three well-developed toes like *Æpyornis*, and that, a

gradual desiccation of the country taking place, it underwent modifications adapting it to a more desert life, attaining the condition above described. Finally, however, the drought became intense enough to lead to the destruction both of this bird and of its contemporary mammals, e. g. *Diprotodon*; but this is a mere suggestion and must be taken for what it is worth. As to the affinities of *Genyornis*, it is perhaps better to wait till the description of the rest of the skeleton is published before expressing an opinion, but it may be remarked that its relationship with *Dromornis australis* is very close. The specimen upon which that species was founded was a very imperfect right femur which in many points resembles that of *Genyornis*, while the differences pointed out by the authors may be, in part at least, explained by the imperfect and more or less crushed condition in which all the specimens are found. It is significant that the portions of a tibia ascribed by Owen to *Dromornis* are regarded by the authors as belonging to *Genyornis*. Messrs. Stirling and Zietz are to be congratulated on having made so substantial an addition to our knowledge of this interesting type, and their account of the skull and remainder of the skeleton will be awaited with much interest.—C. W. ANDREWS.

#### 60. *Winge on the Birds of Greenland.*

[Conspectus Faunæ Groenlandicæ. Aves.—Grönlands Fugle. Af Herluf Winge. Meddelelser om Grönland, xxi. 1898.]

In this valuable contribution to the ornithology of Greenland there are 37 pages of complete bibliography at the beginning and a very necessary map at the end. The species now known as regular inhabitants or frequenters of Greenland are 53 in number, while 8 are of irregular occurrence, and 68 are exceptional wanderers, the total being 129 species. Mr. Winge is becomingly strict as to his list; and he will not even admit a pelagic bird like *Puffinus griseus*, although seen by an excellent observer about sixty miles south of Cape Farewell, because it has not actually been obtained in Greenland waters.